

ABSTRACT

A belt force limiter which limits the belt force through the twisting of a torsion bar. The belt force limiter includes a flange, a reel for winding and unwinding the belt, as well as the torsion bar. Additionally, a shear pin or a deformable pin may be provided for locking the flange and the reel together, so that the relative turning of the flange and reel is prevented or impeded until the tensile force acting on the belt exceeds a preset level momentarily or over a preset period of time. Thus the force limitation is delayed or graduated. Furthermore, in a method for reducing the danger of injury to a vehicle's occupant by means of a restraining system the belt force is allowed to increase to an elevated level of force and then the belt force diminishes again before the belt force limitation begins.

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